Find the maximum angle of inclination to the line of greatest slope of a uniform rod resting on a rough inclined plane and capable of turning freely round a point on it.

BOOKS.

Analytical Geometry for Colleges, Universities, and Technical Schools. By E. W. Nichols, Professor of Mathematics in the Virginia Military Institute. Revised edition. 8vo. Cloth sides and leather back. xi+282 pp. Price, $1.25. Boston and Chicago: D. C. Heath & Co.

Professor Nichols' Analytical Geometry has enjoyed an extended popularity for some years. In the revision of the work, no important changes have been made but several minor changes have been made in order to bring the work in close relation with modern views. This edition is put in pocket form for greater convenience. B. F. F.

Elements of Physics. By George A. Hoadley, C. E., Sc. D., Professor of Physics in Swarthmore College. 8vo. Cloth, 464 pages. Price, $1.20. New York and Chicago: American Book Co.

In this book, the fundamental facts of the subject are presented in logical order and in clear and simple language. Much attention is given to the application of the principles of Physics to every day experiences. The illustrations are good and the book, from the mechanical point of view, is neatly gotten up. B. F. F.

An Elementary Treatise on the Differential Calculus Founded on the Method of Rates. By William Woolsey Johnson, Professor of Mathematics at the U. S. Naval Academy, Annapolis, Md. Abridged edition. Small 8vo. Cloth, x+191 pages; 52 figures. Price, $1.50. New York: John Wiley & Sons.

This book is in great part an abridgment of the author's larger treatise on the same subject. However, the earlier part is entirely revised and the simpler method than the functional method is used, in establishing the principal formulae of differentiation. Throughout the book graphical methods, notably in the case of trigonometric functions, are given preference. Illustrative examples occur in large numbers, and an extensive list of examples with answers follow the several sections. The subject of the Differential Calculus is presented in the work in a very teachable form. B. F. F.

Traité de Mathématiques Générales a l'Usage des Chemistes, Physiciens, Ingénieurs, et des Facultés des Sciences, avec Préface de G. Darboux, Secretaire perpetuel de L'Académie des Sciences. 8vo. Paper cover, x+440 pages. Price, paper cover, 9 fr.; cloth cover 10.50 fr. Paris: A. Hermann & Fils.

As its name indicates, the work is an elementary exposition of general mathematics. It is divided into four parts. The first part treats of Algebra; the second, Analytical Geometry; the third, Analysis; and the fourth, Mechanics. The book is written in clear style and is free from the severer analysis of higher mathematics. It will prove to be of much value to the general student of mathematics as well as to the student of engineering. F.

Plane and Solid Geometry. By Elmer A. Lyman, Professor of Mathematics in the Michigan State Normal College; Ypsilanti, Mich. 8vo. Cloth sides and leather back, 340 pages. Price, $1.75. New York and Chicago: American Book Co.

This book adds human interest to the study of Geometry by introducing now and then a brief historical note. A portrait of Euclid is the frontispiece. B. F. F.

The Foundations of Mathematics. A contribution to the philosophy of Geometry. By Paul Carus. 8vo. Red cloth, gilt top, iv+141 pages. Price, 75 cents net. Chicago: The Open Court Publishing Co.

This work is a very notable and valuable addition to the list of the Open Court Mathematical publications. The author, who is not a mathematician, but a philosopher, has given a very clear exposition of a subject about which there is general misunderstanding and contention. Dr. Carus is a lucid writer, and his discussion of the "Parallel Theorem," the "Fourth Dimension" and other equally interesting subjects is put in such a non-technical form as to be easily understood by the non-mathematical reader. In his Epilogue, Dr. Carus brings out strongly the analogy between mathematics and religion, the ultimate and unchangeable form of being and God. A very interesting and readable book for all classes of readers. B. F. F.

Graded Exercises in Phonography. By William Lincoln Anderson. 137 pages. Price 50 cents. Boston and Chicago: Ginn & Co.

This is an exercise book containing the writing exercises of "American Phonography," by William L. Anderson. B. F. F.

Algebra for Secondary Schools. By Charles Davison, Sc. D., Mathematical Master at King Edward's High School, Birmingham, England. 8vo. Cloth, viii+623 pages. Cambridge: The University Press. New York: G. P. Putnam's Sons.

This book is well adapted for use in all secondary schools. Three chapters are devoted to graphs. The problems are numerous and well selected. While the subjects discussed are those commonly included in most text-books on this subject, a few, such as the remainder theorem and simpler partial fractions, are introduced at an earlier stage than usual. The book is well written and material well arranged. B. F. F.

Elementary Algebra. By C. H. French, M. S., and G. Osborn, M. S., Mathematical Masters at the Leys School, Cambridge, formerly Scholars of Emanuel College, Cambridge. 8vo. Cloth, xii+506 pages. Cambridge: The University Press. New York: G. P. Putnam's Sons.

This is a revised and enlarged form of a text which the authors say has met with gratifying success. While some changes have been made in accordance with modern methods, the authors have carefully retained the main distinctive feature of the original work, viz., simplicity of style. The examples are largely original but a number have been taken from examination papers set at Cambridge and elsewhere. In this work as in the previous one, the answers are put at the end of the volume. B. F. F.